



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/656,346

09/05/2003

Reiner Raffel

GOS-22

7800

20311 7590 06/30/2008
LUCAS & MERCANTI, LLP
475 PARK AVENUE SOUTH
15TH FLOOR
NEW YORK, NY 10016

EXAMINER

COONEY, JOHN M

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

06/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/656,346
Filing Date: September 05, 2003
Appellant(s): RAFFEL ET AL.

Donald C. Lucas
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 4-28-08 appealing from the Office action mailed 10-26-07.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

Rejections under 35 USC 102(b) over Sulzbach et al.(6,019,919) and Sulzbach et al.(5,643,970) are withdrawn.

Rejections under 35 USC 103 over Sulzbach et al.(6,019,919) and Sulzbach et al.(5,643,970), taken alone, are withdrawn.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,840,778	ALTHAUSEN ET AL.	11-1998
6,019,919	SULZBACH ET AL.	2-2000
3,220,801	RILL,JR. ET AL.	5-1965
6,809,124	SULZBACH ET AL.	10-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejection - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, and 4-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Althausen et al.(5,840,778).

Althausen et al. discloses continuous methods for preparing polyurethane foams by mixing and metering into a mixing chamber area and reacting materials including

Art Unit: 1796

polyol, isocyanate, carbon dioxide and water wherein the process includes generating bubble nuclei due to pressure reduction through passage through orifices, including passageways containing sieves or perforated plates, in the direction of the downstream flow by adjustable orifices and valves reading on the throttle body as defined by appellants' claims, and application of the material to a surface utilizing pressure conditions within the ranges of values defined by appellants' claims in order to arrive at processes and apparatuses reading on those claimed by appellants (see abstract, figures, column 1 lines 16-37, column 2 lines 13-16 & 42 et seq., column 3 lines 1-41, column 4 lines 1-67, column 5 lines 1-53, column 6 lines 6-14, and column 7 line 59-column 10 line 15, as well as, the entire document). Althausen et al. provides for employment of static mixers as mixers used in mixing components of their invention (see column 5 lines 23-24). Accordingly, it is held that selection of a static mixer to perform the function of a mixing apparatus is an embodiment that is readily envisioned from the teachings of Althausen et al.

The following rejection is set forth in the alternative to the above rejection:

Claim Rejection - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2, and 4-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Althausen et al.('778).

Althausen et al. discloses continuous methods for preparing polyurethane foams by mixing and metering into a mixing chamber area and reacting materials including polyol, isocyanate, carbon dioxide and water wherein the process includes generating bubble nuclei due to pressure reduction through passage through orifices, including passageways containing sieves or perforated plates, in the direction of the downstream flow by adjustable orifices and valves reading on the throttle body as defined by appellants' claims, and application of the material to a surface utilizing pressure conditions within the ranges of values defined by appellants' claims in order to arrive at processes and apparatuses as claimed by appellants (see abstract, figures, column 1 lines 16-37, column 2 lines 13-16 & 42 et seq., column 3 lines 1-41, column 4 lines 1-67, column 5 lines 1-53, column 6 lines 6-14, and column 7 line 59-column 10 line 15, as well as, the entire document).

Althausen et al. differs from appellants' claims in that the mixing chamber used to mix their reactive components is not particularly identified as being static. However, the disclosure of Althausen et al. provides for employment of static mixers as being acceptable mixers for the purpose of mixing components of their invention (see column 5 lines 23-53). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the static mixer disclosed by Althausen et al. as the mixer employed in the mixing chamber of the processes and apparatuses of Althausen et al. for the purpose of providing the effect of mixing in order to arrive at the processes and

apparatuses of appellants' claims with the expectation of success in the absence of a showing of new or unexpected results.

Claim Rejection - 35 USC § 103

Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rill, Jr. et al.(3,220,801) in view of Sulzbach et al.(6,019,919).

Rill, Jr. et al. discloses polyurethane foam forming metering apparatuses employing mixing elements, valves, and nozzles arranged as claimed by appellants (see diagram the entire document).

Rill, Jr. et al. differs from appellants' claims in that it does not include or require a static mixer alone or in addition to the mechanically pin-type agitating mixer of its disclosure. However, Sulzbach et al. provides for employment of static mixers for the purpose of providing acceptable mixing of components in urethane synthesis operations (see column 5 line 60-61). Accordingly, it would have been obvious for one having ordinary skill in the art to have employed the static mixer disclosed by Sulzbach et al. as the sole or an additional mixer employed in the mixing chamber of the apparatuses of Rill, Jr. et al. for the purpose of providing an energy conserving mixing effect in order to arrive at the processes and apparatuses of appellants' claims with the expectation of success in the absence of a showing of new or unexpected results. Substituting a static mixer for a mechanically assisted mixer would have been a substitution within the skill of the ordinary practitioner if energy saving were an interest and concern. Including a

Art Unit: 1796

static mixer in addition to the mechanically assisted mixer of Rill, Jr. et al. would have been within the skill of the ordinary practitioner if improved mixing efficiency were desired without added energy cost.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1,2, 4-13 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 6,809,124.

Although the conflicting claims are not identical, they are not patentably distinct from each other because the methods and devices of the claims overlap in features and a manner which would have been obvious to one having ordinary skill in the art.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

(10) Response to Argument

Appellants' arguments have been considered. However, rejections as set forth above are maintained.

As to rejection under 35 USC 102 over Althausen et al., it is held and maintained that the elements of appellants' as claimed are met by the teachings of Althausen et al.

As to the employed static mixer of appellants' claims for mixing the reactive mixtures, Althausen et al. in its own teaching (column 5 lines 24-25) highlights a static mixer as a means for mixing materials of its invention. Though such a mixer is not again exemplified at column 5 lines 39-41 when passage to the mixing zone disclosed, it is held that one having ordinary skill would have readily envisioned such a non-moving mixer for performance of the mixing at the mixing zone from the disclosure provided by Althausen et al. Additionally, it is noted that nothing in appellants' claims distinguishes the static mixer as defined by appellants' claims from the passageways and other features associated with the mixing apparatus (40) of Althausen.

As to the bubble nucleating operation of appellants' claims, distinction is not seen. Looking to figures 6 & 7 of Althausen et al. it is held that passage from the mixing apparatus (40) to the substrate (50) all of the operations required to meet the claim elements as defined by appellants' claims are met. Atomization due to sheer on passing through the perforated plates (18) in the apparatus of Althausen et al. meets the atomization requirement of appellants' claims without specific degrees of separation being defined in the claims. Passage through the system of Althausen et al. from the

mixing apparatus through the perforated plates meets the pressure reduction body requirements of appellants' claims.

As to appellants' arguments regarding the performance of a two stage pressure reduction operation, such is not reflected by the limitations of the claims. It is not defined or required by claims 1,2, and 4-9 that the pressure reduction body be separate from the throttle body. Component (44) of Althausen et al. meets the throttle body of appellants' claims, and the claims do not distinguish over the pressure reduction body being the area of flow immediately beyond the mixing area and including the attached and included perforated plates contained within the throttle body(44).

Further, claims 10-13, which require that the throttle body be downstream of the pressure reduction do not distinguish from Althausen et al. because these claims do not limit the pressure reduction body in the manner defined by claim 1. Claims 10-13 only require that the pressure-reduction body be any space between the mixing component (40) and throttle body (44), and it is seen that any space provided between these components through connector elements at their connection points are sufficient in meeting the pressure-reduction body as defined by these claims.

As to appellants' arguments regarding the alternative rejection under 35 USC 103 over Althausen et al., it is held and maintained that employment of a static mixer as provided within Althausen et al. in performing the mixing of the reactive components would have been well within the purview of the ordinary practitioner in the art having the full disclosure of Althausen et al. at their disposal. Though Althausen et al. does not specify mixers for mixing their reactive components, its own disclosure does provide a

remedy to this deficiency for a practitioner looking to readily available means for performing such operations.

As to the rejection over Rill, Jr. et al. in view of Sulzbach et al.('919) it is maintained that the substitution of mixing means would have been obvious for the reasons set forth, and appellants' have set forth no arguments or showings negating this position. Additionally, it is held that claims 10-13 do not require the subsequent and spatially separate nucleation of blowing agent discussed in appellants' arguments. Also, claims 10-13 only require that the pressure-reduction body be any space between the mixing element and throttle body/release component, and it is seen that any space provided between these components through junctures, connections, and flow elements therebetween are sufficient in meeting the pressure-reduction body as defined by these claims.

As to the obviousness-type double patenting rejection, it is held that employment of mixers, such as static mixers, for performance of the disclosed claim function of mixing would have been an element within the purview of the ordinary practitioner in the art motivated by the need for a readily available and expedient means for mixing materials.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Art Unit: 1796

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

John M. Cooney, Jr.

/John Cooney/

Primary Examiner, Art Unit 1796

Conferees:

/James J. Seidleck/

Supervisory Patent Examiner, Art Unit 1796

/David Wu/

Supervisory Patent Examiner, Art Unit 1796